UNIQUE CHARACTERISTICS OF ALASKA

INTRODUCTION

The State of Alaska is extremely large and sparsely populated. The state is relatively undeveloped with the exception of a few urban areas. There is little existing infrastructure in the way of roads, railroads, ports, and power generation. Whereas the contiguous 48 states have well developed power grids, often originally funded by the federal government. Alaska is struggling to provide power to its residents and businesses. Federal funding programs for developing power no longer exist and the applicable regulations are more stringent making power generation an extra costly obstacle for the State and/or local communities. If industry chooses to develop power, the federal government imposes stricter technological requirements that further increase the cost of development in Alaska. This is particularly concerning in rural Alaska where there are limited economic opportunities and communities ranks among the poorest in the nation.

The air quality regulations have been developed in the contiguous 48 states with little regard for the unique conditions of Alaska. Regulations have been set up to deal with temperate, populated, well developed states. As such, the regulations and guidelines are not necessarily appropriate for Alaska. It is for situations such as this that the regulations allow for some range of discretion. The current federal objective of providing nation-wide consistency counters the State's right and need to exercise discretion. It is important that we preserve the right to apply discretion, and deviation from the national norm to address the unique conditions in Alaska.

This issue is relevant in weighing the pros and cons of the State maintaining primacy in relation to air permitting. They are issues, which history has proven, are not well understood or sympathized with by the federal government.

If the State chooses to maintain the air permitting program, then the unique conditions in Alaska need to be, by program design, a major consideration in all permit development. Alaska regulations need to document the existence of these unique conditions and require their consideration wherever appropriate.

LIST OF UNIQUE CONDITIONS AND THEIR IMPLICATIONS FOR AIR PERMITTING

- Permafrost
  - Conventional construction methods may cause deterioration of permafrost
  - Construction that includes permafrost protection may be more costly
  - Construction that includes permafrost protection may take more time
  - Excavation may not be feasible in some locations
  - Some structures may not be suitable
    - Extensive fencing tends to fall down
    - Tall monitoring towers may be unstable
  - Impacts on Environmental Permitting
    - Requirements for fencing facility boundaries impractical
    - Requirements for tall monitoring towers may be impractical

- Remote locations/lack of road system, railroad, and infrastructure
  - Limited means of transporting supplies and products
  - Impacts on Environmental Permitting
    - Requirements to exclude public access through barriers are less necessary.
    - Requirements to monitor or patrol boundaries are less necessary and frequently infeasible or unsafe.
    - Air quality increment limits are less meaningful because of little or no potential for nearby development.
    - Lack of power grid puts the onus on developers to produce power – as a private power producer, the developer often faces additional costs because the pollution control requirements are often more stringent.
    - Lack of power grid puts onus on small communities to develop power generation. These communities are rural and generally low income villages with little resources to expend on conventional pollution control technology.
    - Lack of accessible expertise to operate and maintain power generation
    - Lack of available power for offsite monitoring sites – portable generators frequently fail, invalidating data recovery requirements or contaminating data with emissions from diesel-fired equipment. Provisions need to be made for missed data.*
    - Lack of available power and access for offsite monitoring sites may make data collection prohibitively expensive for some projects.
    - Alternative power generation through batteries may not be feasible due to short battery life in cold weather. Provisions need to be made for missed data.*

- Expanse of the State (1/5 the size of the continental United States)
  - Limited meteorological data available
  - Wide variety of climactic conditions from temperate coastal to high arctic interior
  - Implications for environmental permitting
    - Permits may be based on inappropriate data

        - Extensive data collection frequently required
        - Misconceptions about climatic conditions are common
        - Air Quality Control Regions are extremely expansive (often the size of several states and some states are divided into more than a hundred zones) and based on limited data.

- Presence of migratory mammals
    - Fencing requirements obstruct migratory routes.
    - Operations are frequently curtailed during migratory periods.
    - There is limited available data on migration routes.
    - Migration routes are not always predictable.
    - Implications for Environmental Permitting
        - Fence requirements may conflict with wildlife management
        - Application and permit deadlines need to allow for interference from migration interruptions.
        - Monitoring requirements need to allow for missed data due to migration interruptions.*

- Presence of dangerous animals
    - Dangerous animals are frequently present in the field
    - Implications for Environmental Permitting
        - Need provisions for missed data due to the presence of dangerous animals at sampling sites.*

- Extreme cold – sub zero temperatures
    - Implications for Environmental Permitting
        - Too cold at times to safely conduct field monitoring – need provisions for missed data.
        - Monitoring instrumentation often fails during cold weather – batteries expire quickly – need provisions for missed data*.

- Limited Construction Season
    - Extreme limited daylight during winter - 0 to 4 hours
        - Safety
        - Ability to see work itself
    - Extreme cold – sub zero temperatures
        - Concrete cannot be poured
        - Excavation may require warmer periods
        - Some materials become too rigid to work with (liners)?
        - Safety
    - Limited shipping season for remote sites to bring materials on site.
    - Implications for environmental permitting
        - Minor delays in permitting can delay construction during the available seasonf for a year or more because of missed shipping deadlines.
        - Deadlines to bring a site into compliance may be too short for practicality.

*While the agencies are generally understanding of these circumstances, the missed data are still permit violations subject to enforcement and/or civil suits)